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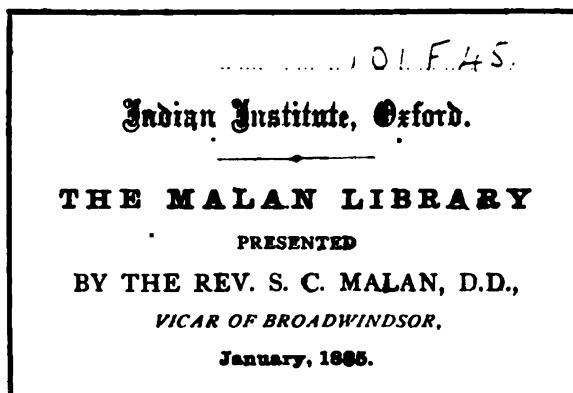
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ON

# THE VARIOUS YEARS AND MONTHS

IN USE AMONG

## THE EGYPTIANS.

BY THE  
REV. EDWARD HINCKS, D. D.

FROM THE TRANSACTIONS OF THE ROYAL IRISH ACADEMY, VOLUME XXIV.—POLITE LITERATURE.

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READ JUNE 26TH, 1865.

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DUBLIN:  
PRINTED BY M. H. GILL,  
PRINTER TO THE ROYAL IRISH ACADEMY.  
1865.



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1. IT is now twenty-seven years since I wrote a paper on the years and cycles used by the ancient Egyptians, which was published in the eighteenth volume of the "Transactions of the Royal Irish Academy." At that time Egyptology was in its infancy. I accepted as an unquestionable truth a statement of CHAMPOILLION's respecting the tetramenies of the Egyptian year, which is now considered by the great majority of Egyptologists to have been proved to be erroneous; and I drew conclusions which, though legitimately following from that statement, I have been compelled to renounce, as inconsistent with the true statement that has taken its place. I will begin the present paper with explaining the statement of CHAMPOILLION and that which has superseded it.

2. CHAMPOILLION thought that the first of the three tetramenies of the Egyptian year was that of *vegetation*, beginning when the waters of the inundation subsided, the second being that of *ingathering*, and the third that of *inundation*. He gave these three values to the characters which hieroglyphically denoted the tetramenies, supposing them to represent *water plants*, *a house*, and a *basin of water*, and to be used ideographically. In 1838, when I wrote, no one doubted that this was correct, and of course that a year which began about four months after the commencement of the inundation, or the summer solstice, which synchronized with it, was the normal year to which the names of the tetramenies were adapted. It was not till 1856, when BRUGSCH published his "Nouvelles Recherches sur la Division de l' Année des anciens Egyptiens," that the views of CHAMPOILLION on this subject were called in question, and, in the judgment of most Egyptologists, completely disproved. According to BRUGSCH, the names of

the tetramenies were to be read phonetically. The first, *sha*, was *the inundation*; the second, *per*, was *the winter*; and the third, *shemou*, was *the summer*, or, rather, *the genial season*. I thought it due to M. BRUGSCH to examine his arguments and all that could be said against them with as much care as I could; and the result was, that I was completely satisfied that he was right; most other inquirers also came to a similar conclusion.

3. Now, as my paper of 1838 rested on CHAMPOILLION's arrangement of the tetramenies as its foundation, it fell to the ground, as a matter of course, when that arrangement was overthrown. It was not in the early part of the eighteenth century before Christ that the months of the wandering year were in their normal position, but towards the end of the fourteenth, or the beginning of the thirteenth; and between that time and the appearance of the Phoenix recorded by TACITUS, no round number of years, such as 1800, could have elapsed. No number about 1300 has a cyclical character, or is a multiple of any that has. Again, I supposed that a year equivalent in its average length to the tropical year continued in use till 1767 B. C., when it was superseded by the wandering year. According to BRUGSCH's discovery, however, it was not in 1767 B. C. that the wandering year would be in its normal position, but about 500 years later, or about 1000 years earlier. The latter would take us to 2767 B. C., which is not far different from the commencement of the Sothic cycle, 2920 years before that which CENSORINUS states to have begun 100 years before A. D. 238, the year when he wrote. If the cycle began in 139, as is generally supposed, the wandering year would thus have originated in 2782 B. C.; but if it began in 138, as I expect to be able to show that it did, the first wandering year would have begun on the 20th of July of the proleptic Augustan year 2783 B. C., a few days after the solstice and the commencement of the inundation.

4. All this is, however, on the supposition that the Egyptians had a Sothic cycle, such as CENSORINUS describes, and that the wandering year by which the Alexandrine astronomers dated the observations which they made was an Egyptian year. No one, I believe, entertained any doubt as to this being the case, till, in 1864, that same BRUGSCH, who corrected CHAMPOILLION's mistake respecting the tetramenies, advanced the startling position that the Egyptians knew nothing of a wandering year; and that the civil year, by which they dated the events recorded on their monuments, was a fixed year, commencing at

the end of August, and coinciding with that Alexandrian year which is commonly supposed to have been introduced in memory of the capture of Alexandria by Cæsar Octavianus.

5. Such are the strange positions contained in the "Matériaux pour servir à la Reconstruction du Calendrier des anciens Egyptiens," published in 1864. I have examined this singular work with the same care as I did his "Nouvelles Recherches;" and, if I know myself, with the same openness to conviction; but the results of my two examinations have been totally different. While I felt myself constrained to submit to the arguments used by him in his work of 1856, I feel equally confident that those which he adduces in his last work are of no force whatever. With respect to the use of the wandering year, he has ignored many conclusive arguments that have been long known; and he has really been able to find nothing against it save one document, which he misquotes; the whole force of his argument lying in a number which is different in the original from what he gives in his text. Restore the genuine reading, and his argument fails. Again, he can bring forward no document earlier than the capture of Alexandria by Octavianus, in which the year can be proved to have begun at the end of August, save one which is of an age in which the wandering year would begin at that time. His book is not useless, because it contains some new and valuable *data*; but I have never met a book, the author of which shows such perverse ingenuity in drawing false conclusions from the documents which he brings forward.

6. The *πρῶτον ψεῦδος* of M. BRUGSCH in his recent work is, that the civil year of the Egyptians was not a wandering year of 365 days. My first business must, therefore, be to establish this fact; which I will do by a mass of testimony such as, I believe, can be produced in support of no other chronological fact. In the first place, it is undeniable that the Alexandrian astronomers dated by a year which had always 365 days, and the commencement of which, consequently, wandered through the seasons; the year beginning on the 20th of July in the four years, A. D. 136, 137, 138, and 139. We have dates of such a year not only in the records of the Babylonian inscriptions, but in records of observations made at Alexandria itself. We have, then, to choose between three alternatives:—Was this year of the Alexandrian astronomers introduced from Babylon? Was it invented by the astronomers? Or was it a year

already known to the Egyptians? Independently of direct testimony, the first two of these hypotheses are in a high degree improbable. The Babylonians appear from the cuneiform records to have known no other year than the lunar year, with intercalary months, restraining its commencement within certain narrow limits. It is certain, at least, that the Babylonian astronomers used such a lunar year ; and it is not likely that the Alexandrian astronomers had any other Babylonian documents before them than those furnished by the Babylonian astronomers. Again, if the wandering year was the invention of the Alexandrian astronomers, what reason can be given for their making it commence on the 26th February, if they took for an era that of their astronomical tables ; or in November or October, if they looked to their own times ? And what could have induced them to give the names of the Egyptian months to those of their newly invented year, seeing that these were already appropriated to the months of two fixed years, according to M. BRUGSCH ; one beginning in the latter end of August, and one on the 20th of July ?

7. But let us hear what the Alexandrian astronomers say themselves of this wandering year that they used. How did they describe it, to distinguish it from the Athenian year, from that of the astronomer DIONYSIUS, and from that of the Alexandrians, dates of all of which are equated in their writings to that of the wandering year ? I quote from YOUNG's Astronomical and Nautical Collections, giving Dr. YOUNG's references to his authorities. "TIMOCHARIS writes that he observed, in Alexandria, the 47th year of the first Calippic period of 76 years, on the 8th of Anthesterion, or the 29th of the *Egyptian* month Athyr" . . . .—HALMA's "Ptolemy," vol. ii., p. 21. "In Dionysius's 13th year, the 25th of his month *Ægon* . . . the 20th, 21st of the *Egyptian* month Athyr."—HALMA, vol. ii., p. 226. The former of these equations places the 1st of Athyr on the 1st of January, B. C., 283, and the latter on the 29th of December, B. C. 273 ; and of course the 1st of Thoth on the 2nd of November, B. C. 284, and on the 30th of October, B. C. 273. M. BRUGSCH, however, will admit no Egyptian Thoth which does not begin on the 20th of July, or between the 24th and 30th of August.

8. The remaining example seems still more to the point. Dr. YOUNG quotes from THEON, "p. 284, 277, 281 B." (I give the reference as I find it), "An eclipse of the moon was observed by THEON the commentator 6 $\frac{1}{2}$  hours after noon of

the 6th Phamenoth." There can be no doubt that the day intended is the 25th of November, A. D. 364. From this it follows that the 1st of Thoth was in that year on the 24th of May. THEON says, also, that "this was the 81st year of Diocletian, *according to the Alexandrians*, in the month of Athyr, but *according to the Egyptians*, the 81st year in the month of Phamenoth." Here we have the wandering year, as used by the astronomers, described as that of the Egyptians, while the fixed year, beginning on the 29th August, which was gradually superseding it, is distinguished as that of the Alexandrians. Now, we find in several documents of the Roman period a date characterized as, "according to the ancients." Surely it is natural to suppose that this phrase is equivalent to "according to the Egyptians," in the passage from THEON just cited; and it was a most natural expression when the Alexandrian year was gradually coming into general use in Egypt. That those two phrases were equivalent M. BRUGSCH himself admits, "Matériaux," &c., p. 17; but he maintains that both refer to the Sothic year, which began on the 20th July. This, however, is most certainly not true of the expression as used by THEON.

9. It appears to me rather strange that M. BRUGSCH should labour to prove that the Egyptians had a fixed year, commencing at the rising of Sothis, or about the 20th July, as if this was denied by Egyptologists in general, or as if it were inconsistent with the existence of a wandering year. The received theory is, that the Egyptians had a fixed or Sothic year, and also a wandering year; and that they had a cycle which consisted of 1460 fixed years, and 1461 wandering years; the commencements of the two years coinciding for four consecutive years, about 2783 B. C., 1323 B. C., and 138 A. D. What M. BRUGSCH says in pages 18 and 19 may therefore be dismissed as perfectly irrelevant to the question under discussion. I will now make a few remarks on the Calendar of Esne, which will, I think prove that, in respect to the use of the phrase before us in it, he is completely in error.

10. In the calendar of Rameses III. at Medinet Habou (col. 12), the feast of the apparition of Sothis is fixed to the first of Thoth. From this it appears that this date, and of course all the dates in the calendar, are dates of the fixed or Sothic year. Among these dates there is one (col. 26) in which the setting up of the Tat (or Dudu, as M. BRUGSCH calls it) is fixed to the 30th Choiak. But in the calendar of Esne, of the Roman period, the setting up of the Tat is

assigned to the very same day. Surely it is a fair inference that the Esne calendar was arranged, like that of Medinet Habou, according to the fixed Sothic year, its first of Thoth coinciding with the 20th July of the Romans, or at any rate with the day of the Heliacal rising of Sirius, which occurred *about* the 20th. If this be so, the 9th of Thoth would be on or *about* the 28th July; but the calendar states that this was the beginning of the year "according to the ancients." This is quite in harmony with the views that I have already expressed. It was the first of Thoth of the ancient wandering year at the time when the calendar was engraved; and it would be so about 106 A.D. Now, as has been correctly remarked by BRUGSCH, there is no emperor's name connected with the calendar, or found in its vicinity. LEPSIUS assigns it to the reign of Claudius, but has given no reason for doing so. All that seems to be known is, that the hieroglyphics are, as CHAMPOLLION long since pointed out, in the very worst style, indicating a very late age.

11. According to M. BRUGSCH, the 9th of Thoth was the first day of the Sothic year, as he thinks that the dating "according to the ancients" was a dating according to that year. His reason for so thinking appears at first sight a very good one; but it breaks down on examination, resting on a false reading of the document on which he relies. He says (p. 17) that a papyrus of an astrological nature, preserved at Paris, is dated in the *tenth* year of Antoninus Cæsar, the lord, on the 8th of the month Hadrian, but according to the ancients the 18th Tybi. The month Hadrian is evidently the Choiak of the Alexandrian year; and the year "according to the ancients" must have begun, according to this document, forty days before the Alexandrian year began, that is, on the 20th July. Now the Sothic year did begin at this time, but the wandering year of the astronomers *did not*; for the tenth of Antoninus was A.D. 147; and in that year the wandering year began on the 18th July. At first sight, as I said, this seems a fair argument; but it rests on the erroneous statement of M. FRANZ, who has, in his "Corpus Inscriptionum," 4736, given L<sup>c</sup> "the tenth year" in place of L<sup>a</sup> "the first year;" and in the first year of Antoninus the Sothic and the wandering years began on the same day, so that there is nothing in this document to neutralize the arguments already drawn from the Esne calendar, and from the words cited from THEON, in favour of the wandering year being that intended.

12. As so much depends on the correct reading of this date, I will give my reasons for rejecting M. FRANZ's reading. In the volume of Hieroglyphics, edited by Dr. YOUNG, there is a fac-simile of this astrological document (Pl. 52, No. 2). The numeral letter denoting the year is made with two lines, a long one descending obliquely from left to right, and a short one, on the left of this, in almost a horizontal direction. A loop in place of this horizontal line is much more usual; but, as Antoninus did not reign twenty-three years, the letter could not have been  $\lambda$ , and there is no other which it at all resembles but  $\alpha$ . Several letters in this papyrus are imperfectly formed: as  $\tau$  and  $\chi$  in the word  $\tau\chi\gamma$ ; and the second  $\alpha$  in  $\alpha\gamma\alpha\theta$ . Indeed, the omission of the final vowel in this word seems a defect of the same sort. M. FRANZ's reading of  $\iota$  seems to have originated in a notion that one of the lines of this combination must represent the horizontal line which distinguishes numerals. If so, however, the  $\iota$  must either be written horizontally, which is evidently absurd, or sloping in the opposite direction to what it does elsewhere, when not vertical, as, e. g. in  $\gamma\epsilon\epsilon\alpha\iota\alpha$  in the first line. Besides M. FRANZ has no right to assume that a numeral letter would have a horizontal line over it after the sign L, which would sufficiently distinguish it as such.

13. To remove, however, all doubt on the subject, I inquired in what year the heavenly bodies would be in the positions indicated in this document; in A. D. 138, which is commonly reckoned to be the first of Antoninus, or in A. D. 147, his tenth. To my surprise, I found that the year indicated was neither of these two, but most certainly A. D. 137. The positions of the heavenly bodies which are given in this document are evidently obtained by calculation, and not by observation; the moon, for instance, and Saturn being below the horizon at the time of the native's birth. We may therefore expect an error of one or two degrees in the positions, as compared with those obtained from modern tables; but an error of much greater amount is not to be thought of. Now, in the first place, the sun's place is said to be in  $13^{\circ} 23'$  of Sagittarius. This points to some day soon after the beginning of December, but gives no information as to the year. Saturn is said to be in  $3^{\circ} 8'$  of Aquarius, being retrograde. According to LALANDE's Tables, he was in this position in the early part of December, A. D. 137. His advance in the heavens is above twelve degrees annually, heliocentrically; and his geocentric place can never be very

far from his heliocentric place. It is not likely, therefore, that the position in the papyrus could refer to A. D. 138; and it is quite certain that it could not refer to A. D. 147, when Saturn would be more than  $120^{\circ}$  from the place indicated. Let us now look to the moon. She is said to be in  $3^{\circ} 6'$  of Aquarius (almost exactly in conjunction with Saturn), and there she was on the morning of the 4th December, A. D. 137; that is, in astronomical language, on 3rd December, 19 or 20 hours P. M.; but in A. D. 138 the moon was at that time of the month far away from Saturn and from the sign Aquarius. That the year intended was A. D. 137, does not, indeed, admit of the slightest doubt.

14. Now let us consider what follows from this. In the first place, the 8th of Choiak being the 4th December, the 1st of Thoth must have been the 29th August. This is in perfect agreement with what we know of the Alexandrian year. "According to the ancients," however, it was the 18th of Tybi, which coincided with the 4th December. This would give 20th July, A. D. 137, as the 1st of Thoth of the *ancient* year, and this was certainly the first day of the wandering year used by THEON, and attributed by him to the Egyptians. M. BRUGSCH assumes, as if it had never been questioned, that the 20th July, A. D. 137, was the first day of the Sothic year. According to LEPSIUS, however, the first of Thoth of that year was the 19th July. I will bring forward new evidence on this matter after a while. At present I will only say that, if BRUGSCH be right, the two years, Sothic and wandering, would coincide as to their commencement in A. D. 137, the year in which the document is dated; and nothing can, therefore, be inferred from it against the received opinion that "the year of the ancients" was the wandering year of THEON, PTOLEMY, and the other astronomers.

15. But we may draw a farther inference from the fact that has been established. If the 4th December, A. D. 137, was in the first of Antoninus,—and, by the way, PTOLEMY in his canon makes it so too,—Hadrian must have died on the 10th July, A. D. 137, not A. D. 138, as is commonly thought; and the Consulship of Antoninus Augustus II. and Bruttius Præsens, which immediately followed that in which Hadrian died, must have coincided with A. D. 138, not A. D. 139. But it was on the 20th July in this consulate that the Sothic cycle was renewed according to CENSORINUS; and this, he says, was one hundred years before the year in which he wrote, which, from many statements

that he makes respecting it, was, beyond all question, A. D. 238. The newly proved fact that Antoninus and Præsens were consuls in A.D. 138, removes a difficulty which has been often felt. We may, then, confidently place the commencements of the three cycles on the 20th July, B. C. 2783, B. C. 1323, and A. D. 138, a year earlier than the dates that have been hitherto received.

16. An objection, however, will at once suggest itself to most attentive readers. It is quite certain that the death of Nero and the accession of Vespasian occurred in those years to which they are assigned by the received chronology. M. von GUMPACH has, in the second paper at the end of his "Hülfbuch," placed it beyond all doubt that **NERO** was killed on 9th or 10th June, A. D. 68, and that Vespasian was proclaimed emperor on the 1st July, A. D. 69. It is certain that A. D. 70 was the year in which Vespasian II. and Titus were consuls. It is certain, also, from the testimony of **CENSORINUS**, that Ulpius and Pontianus were consuls in A. D. 238, the year when he wrote. The *fasti*, as generally received, agree with these dates; but they place the consulship of Antoninus II. and Præsens in A. D. 139. If, therefore, the conclusion at which I have arrived be correct, a spurious consulate must appear in the *fasti* somewhere between A. D. 70 and A. D. 138, and a consulate must have been omitted between A. D. 139 and A. D. 238. I admit that this legitimately follows; and I will endeavour to show where the two errors were most probably committed. I do not, however, pretend to have before me all the evidence from inscriptions and medals which may be in existence; and I therefore submit what follows to the better judgment of others, who may perhaps be able to correct the errors which must exist in the received *fasti* in some better manner than what I propose.

17. First, then, I think that the consulate of L. Ceionius Commodus Verus and C. Cornelius Priscus, interposed between the last two consulates of Vespasian and Titus, ought to be erased from the *fasti*. **CASSIODORUS**, **IDATIUS**, **VICTORIUS**, and the Sicilian Chronicle are all agreed that the penultimate consulship of Vespasian and Titus *immediately* preceded the last, on the 23rd of June in which Vespasian died. If they be right in this, we should have

A. D. 77, Imp. Cæs. Vespasianus VIII., T. Cæs. Vespasianus VI.

A. D. 78, Imp. Cæs. Vespasianus IX., T. Cæs. Vespasianus VII.

Commodus Verus and Cornelius (or rather D. Novius) Priscus could only

have been *suffecti*; and were probably so in A. D. 77. This reduces the reign of Vespasian, reckoned from his assumption of the empire, to 8 years 11 months, and 22 days, a year less than is commonly reckoned. I observe, however, that PTOLEMY in his canon allows only ten years to Vespasian, while he reckons into his reign the three short reigns of his predecessors. He makes the year which began A. D. 68, Aug. 6, to be the first of Vespasian, and that which began A. D. 78, Aug. 4, to be the first of Titus. He makes Titus reign three years, there having been three firsts of Thoth in his reign; for he lived till the 13th September, A. D. 80, the 42nd day of PTOLEMY's wandering year. With this testimony of PTOLEMY as to the date of Vespasian's death two authorities at least agree, EUTROPIUS and the Sicilian Chronicle. CLEMENS ALEXANDRINUS also appears to have assigned him a reign of 8 years 11 months and 22 days. The MSS. have 11 years, for which commentators would substitute 9; but no confusion between *θ* and *ω* could possibly have existed, whereas *η* is often written in such a manner as to resemble *ω*, the *ω* being formed as in the astrological papyrus (§ 12). It must be admitted that other ancient authorities give him a longer reign; but there was a great source of confusion in the circumstance that his reign was counted from different epochs:—1st, the death of Nero, of whom he might almost be considered the successor in the East, though an interregnum of above a year elapsed before he assumed the purple—this happened 10th June, A. D. 68; 2ndly, his assumption of the empire on 1st July, A. D. 69; and, 3rdly, the death of Vitellius, 6th December, A. D. 69, when he was left without a competitor. Another argument in favour of the opinion that Vespasian died in A. D. 78 I deduce from his age as stated by Suetonius. He was born on the 17th November in the consulate of Camerinus and Sabinus; that is, as all are agreed, in A. D. 9. If he died in A. D. 79, as is commonly thought, he would have lived 69 years and 7 or 8 months; but Suetonius speaks of his being in his 69th year when he died, “*annum gerens etatis sexagesimum ac nonum.*” I take it that he was in his 69th year from his completing his 68th, which he did in November, A. D. 77, to his completing his 69th, which he would have done in November, A. D. 78.

18. With less confidence I think that the omitted consulship, to be inserted in the *fasti*, was that of Annianus and Maximus in A. D. 226. This is inserted by CASSIODORUS and VICTORIUS immediately before that of Albinus

and Maximus, and it might easily have dropped out from the similarity of the names. I am aware that there is more than one *prima facie* objection to this hypothesis; but none of the objections that I am aware of appears to me conclusive. I think that the insertion of a consulship cannot be made before A. D. 192; because I think that the testimony of CLEMENS, to be presently considered, proves that Commodus was killed at the end of A. D. 191; not, as is commonly thought, of A. D. 192. I think also that the contemporary evidence of DION forbids us to make any change in the lengths of the reigns of Septimius Severus and his son. It is just possible that Maximinus, whose coins prove that he was twice consul, and whose name is expressly stated to have been erased from the *fasti* by his successor, may have reigned a year longer than is commonly supposed. I, however, much prefer the opinion previously expressed; and I think that the fact of Alexander having come to the throne in the spring of A. D. 221 is by no means inconsistent with the fact of A. D. 222 having been reckoned as his first year by HIPPOLYTUS.

19. I have now considered the astronomical testimony, including that of the MS. of which M. BRUGSCH has given an incorrect copy. In my judgment no rational doubt can exist that the Alexandrian astronomers dated by a year of 365 days, such as all Egyptologists prior to M. BRUGSCH supposed to have been the Egyptian civil year; and that these astronomers, when they thus dated, spoke of doing so according to the *Egyptian*, or according to the *ancient* mode; the latter term "ancient" being only used when this mode of dating had to be distinguished from that of the Alexandrians in the Roman period.

20. To this testimony of the astronomers I add that of the distinguished chronologer CENSORINUS, who distinctly affirms ("de die natali," c. 21), that in the year when he wrote (A. D. 238), the 1st of Thoth coincided with the 7th of the kalends of July (25th June), and that 100 years before, it coincided with the 12th of the kalends of August. We must read xiii. in place of xii., which would denote the 20th July, 25 days, not 24, after the day in the year when he wrote; for CENSORINUS had previously stated (c. 18) that the civil year of the Egyptians consisted of 365 days only, without any intercalation; but the Romans would intercalate 25 days in the 100 years. So far as respects the date of the 1st of Thoth in A. D. 238, CENSORINUS is in perfect agreement with the astronomers.

21. I now proceed to consider the testimony of S. CLEMENS ALEXANDRINUS, who, while he would naturally use dates of the Alexandrian year in what he said of himself, cites the testimony of other Egyptians, who dated by the wandering year. The consequence of this has been, that he has been misunderstood by his copyists and editors, and that his text has been corrupted. In its present state we cannot venture to bring forward his testimony, as independent of that of others ; but we may show that on the supposition that his year was that of the astronomers, or (as I contend) the old civil year of the Egyptians, his numbers can, by introducing a few natural corrections, be made to give a consistent testimony, pointing out the true dates of our blessed Lord's Nativity and Crucifixion.

22. S. CLEMENS says, in a well-known passage of the first book of " Stromates," that some placed the Passion on the 25th Phamenoth, others on the 25th Pharmuthi, and others on the 19th Pharmuthi. One of these three is, in all probability, a genuine tradition, of which the other two are corruptions ; and, if so, the second must be the genuine tradition, since it agrees as to the month with the third, and as to the day of the month with the first ; while the first and third differ from each other, both as to the month and as to the day. Now, if we inquire in what year the 25th of Pharmuthi fell on a Friday in the wandering year, we find that it did so in A. D. 30, when it corresponded to the 7th April. According to the best modern authorities, this is the correct date of the Crucifixion. Mr. GRESWELL, under the false impression that in that year the 14th Nisan fell on the 6th of April, has laboured hard to show that in consequence of some interruption in the Calendar this was not Thursday, but Friday. Canon BROWNE has shown, in his " Ordo Sæclorum," that the supposition of an interruption of the Calendar, by which the 6th of April would be on a Friday, is inadmissible, and he therefore places the Crucifixion in a different year. Both these gentlemen, however, have failed to see that the 7th, and not the 6th of April, was the real 14th of Nisan. The first day of Nisan was the first day when the moon was visible. It could not have been so till the evening of the 24th March according to our reckoning ; for the conjunction of the luminaries was between 8 and 9 o'clock on the evening of the 22nd ; and on the following evening, being only about ten degrees past the sun, the moon could not have been seen. If, then, the 1st of Nisan began on the evening

of the 24th of March, the 14th must have begun on the evening of the 6th of April, or, in other words, must have coincided with the Friday, or Preparation, which began on that evening, and ended on the evening of the 7th. I am happy to be able to quote the Bishop of Gloucester and Bristol as advocating this conclusion, at which I had myself arrived many years ago. See "Historical Lectures on the Life of our Lord," p. 323, n. In this admirable work the Bishop has given a more uniformly correct chronology of our blessed Lord's life than is elsewhere to be met with; and with this agrees, as to the date of the Crucifixion, the Egyptian testimony cited by S. CLEMENS.

23. S. CLEMENS further says, that from the Crucifixion to the destruction of Jerusalem are 42 years and 3 months; and from the destruction of Jerusalem to the death of Commodus, 128 years 10 months and 3 days. Now, I think every one must admit that there is here some great corruption of the text. Indeed, I think that it will be generally admitted that there is a complication of blunders; some of them, as generally happens, due to accident, and others to unskilful correction. The latter, I believe, in this instance, both followed and preceded accidental mistakes. I believe that what S. CLEMENS really wrote was as follows:—'Αφ' ὁῦ δὲ ἔπαθεν ἦστι τῆς καταστροφῆς Ἱερουσαλὴμ γίνονται ἐτη Μ μῆνες Ε ἡμέραι Γ, καὶ ἀπὸ τῆς καταστροφῆς Ἱερουσαλὴμ ἦστι Κομόδου τελευτῆς ἐτη ΡΧΑ μῆνες Ε [Γίνονται οὖν ἀφ' οὗ ἔπαθεν ἦστι Κομόδου τελευτῆς ἐτη ΡΧΑ] μῆνες Ι ἡμέραι Γ. In the original text the words *ἐτη*, *μῆνες*, and *ἡμέραι*, were probably omitted, the numeral letters standing alone. The dates of the three events would be, according to this reading, when referred to the epoch of Augustus and the wandering year,

A. Aug. 59, Pharmuthi, 25 = A. D. 30, April 7.

" 100, Thoth, 28 = " 70, September 2.

" 221, Mechir, 28 = " 191, December 31st.

That Commodus died on the 31st December is admitted by all; but this coincided with the 28th Mechir, the date indicated by these numbers, in the years A. D. 188-191. It is to this that I referred in § 18. According to JOSEPHUS, Jerusalem was taken on the 8th Gorpæus, or Elul, and this is commonly reckoned as the 1st September. A mistake of a day might easily have been

made by those who reduced the Jewish to the Egyptian date ; or the moon might not have been seen till the 26th August, in which case the true date of the capture would be the 2nd of September.

24. I now proceed to consider the mistakes by which the true text as above given was corrupted into that which we read in the editions of S. CLEMENS. In the first place, B was substituted for the former of the E's by an accidental mistake, arising from the similarity of the letters ; secondly, as 2 + 5 were not equal to 10, H, eight, was substituted by a corrector for the latter E, five ; thirdly, through accident, or through some very stupid mistake of a corrector, the A was omitted in the second interval. The partial intervals had now become M B Γ and PK H ; and the total remained PΞA I Γ. The remaining mistakes are of an obvious character. The passage which I have placed in brackets dropped from the text, and the numeral letters were improperly joined together, giving two intervals in place of three, namely, MB Γ and PKH I Γ.

25. The date of the wandering year when Commodus was killed, viz., 28th Mechir, is confirmed by another statement of the same author. He gives 194 years 1 month and 13 days from the birth of Christ to the death of Commodus. This last was A. Aug. 221, Mechir 28 ; which gives for the birth of Christ A. Aug. 27, Tybi 15, or B. C. 3, January 5. Now, S. CLEMENS mentions 15th Tybi as one of the dates traditionally current for the baptism of Christ ; and he says that some persons celebrated his birth and his baptism on the same day. So far as the years are concerned, this accords perfectly with the views of the Bishop of Gloucester, leaving 32 Julian years and 92 days, or 32 Egyptian wandering years and 100 days, between our Lord's birth and crucifixion. If we prefer reading 196 for 194, which some will probably do, though I do not, the birth will be thrown back to B. C. 5, January 6th, which would bring the Nativity to that day of the Julian year on which the baptism has been usually placed. I will not discuss this matter further. If the interpretation which I have proposed commends itself to any one, it will be to him an additional argument in favour of my views respecting the Egyptian civil year, as opposed to those of M. BRUGSCH. If otherwise, however, let it be carefully observed, that M. BRUGSCH's views obtain no confirmation from what is said by S. CLEMENS. No possible interpretation of these words can reconcile what he says

to a reckoning by the Alexandrian year. He either recognised the civil year of 365 days without intercalation, or he wrote a tissue of absurdities ; and on the former hypothesis, which is *a priori* much the more probable, he fixes the dates of the Nativity and Crucifixion in conformity with the results of modern criticism, as best expounded by the Bishop of Gloucester and Bristol.

26. I now pass to the evidence of the Rosetta Stone. This is dated on the 18th of Mechir in the 9th year of Epiphanes, which, if not in B. C. 196, cannot be far distant from that date. According to M. BRUGSCH, the Egyptians had no other year than what began on the 20th July, and what might be as early as the 25th August, and as late as the 29th. According to him, therefore, the Rosetta Stone was dated either on the 3rd January, or the 8th-12th of February. It is, however, equated on the Rosetta Stone to the 4th of Xanthicus. Let us see how this will accord with M. BRUGSCH's dates, and how with the date by the wandering year, which in B. C. 197 began on the 11th of October, giving for 18th Mechir B. C. 196, March 27th. Now, the Egyptians used during the Ptolemaic period two sorts of Macedonian years—first a lunar one, and subsequently a solar one. The lunar Xanthicus was the same as the Hebrew Nisan, according to JOSEPHUS, who makes it the month of the Passover; and some have thought that this was the month intended, the 24th March, B. C. 196, having been the 1st of Xanthicus. In that year, however, the moon must have been visible on the 22nd, and it can scarcely be supposed that, when the Calippic periods were in use, the Greeks in Egypt could have used a lunar year which would admit such an error as this. It is probable, therefore, that it was the 4th of the solar Xanthicus, with which the 18th Meehir coincided. According to Archbishop USSHER in his treatise, "De Macedonum et Asianorum Anno Solari" (pp. 46, 47, ed. 1648), the month Xanthicus began in bissextile years on the 24th March, in other years on the 25th, and this he proves to be the case by a series of double dates, beginning with A. D. 67. Now, the year B. C. 197 was proleptically bissextile ; in it, therefore, the 27th March was the 4th Xanthicus, and it was also the 18th Meehir of the wandering year. In the three years next before this, the 4th Xanthicus would also have coincided with the 18th Meehir of the wandering year ; both dates corresponding to the proleptic 28th of March ; but these years are too early for the 9th Epiphanes, which must, therefore, have included, the 27th of March,

B. C. 197, the true date of the Rosetta Stone, as I pointed out in 1842, in a paper in vol. xix. of the "Transactions of the Royal Irish Academy." I need scarcely say that none of M. BRUGSCH's possible Egyptian dates of the stone can be made to coincide with the Greek date by any legitimate process.

27. I will now go back to a much earlier period, and will prove that the Turin Book of Kings, which dates from the eighteenth or possibly the seventeenth dynasty, recognises the wandering year as in use when it was composed. I assign this date to the Turin Book of Kings, because, while it contains Hykshos names, as M. DEVERIA has recently proved, it contains no names of the eighteenth dynasty, nor even of the seventeenth, to which I refer Kames and Taanaken. The name of Rameses II is found on the reverse of the papyrus in connexion with accounts; and it seems to me by no means probable that the back of such a document as this should be scribbled upon until it was considered old, and a copy had perhaps been taken. Is it too much to hope that such a copy may yet be found, in such a state of preservation as to clear up the difficulties which yet remain in respect to early Egyptian chronology—perhaps, too, continued to the nineteenth dynasty, so as to be parallel to the latter portions of the invaluable Tablets of Abydos and Saccara?

28. As what I have to bring forward from the Turin papyrus in proof of the existence of the wandering year is of the very highest importance, both in itself and in the conclusions to which it leads, I will discuss it in all its bearings, so as, I trust, to convince every Egyptologer of the rectitude of my views. I must begin with establishing two positions, which I have maintained for several years, and which I shall have to use in the course of my proofs. The first is, that all the native Egyptian kings counted the years of their reigns from their respective accessions, just as our English sovereigns do; and not, as PTOLEMY counted the reigns of the kings in his canon, from the commencement of the civil year, nor from the commencement of any other sort of year. This position was laid down by M. DE ROUGE in 1860 ("Inscription de Karnac," p. 27). To the proofs of it which he has given in this memoir, I would add that derived from the inscription on the obelisk of Karnac. The preparation of this obelisk is said to have begun on the first Mechir in the fifteenth year of Hat-asu, and to have been completed in Mesore in her sixteenth year, occupying seven months. In this inscription we must by no means substitute 15th for

16th, nor *vice versa*; nor yet nineteen for seven, as some writers have not scrupled to do. We must take the text as it stands, making the sixteenth year of Hatasu to have begun between the first of Mechir and the end of Mesore.

29. My second position is, that the regnal years of the native Egyptian kings consisted of twelve months, or 360 days *only*; so that the commencement of each regnal year after the first was on a day of the civil year five days before the commencement of the preceding regnal year, and so that 73 regnal years would be equal to 72 civil years. I was first led to this conclusion by finding, as the result of a critical restoration of MANETHO, that he counted the length of the 26th dynasty as 157 years, while the sum of the respective reigns was 159 years. The sum of the years in the dynasty was obtained by reducing the regnal years to civil years. Precisely in the same manner, the duration of the dominion of the Shepherds in Egypt is given by MANETHO as 518 years, by JOSEPHUS as 511. The latter number of civil years is equal to the former number of regnal years. It would certainly be desirable to confirm this conclusion by showing, from dated monuments, that different regnal years of the same king began on different days of the civil year. I have thought that such a confirmation was afforded by comparison of the inscriptions in LEPSIUS' "Denkmäler," Abth. iii, Bl. 31 b., l. 13, and Bl. 32, l. 13. If the dates in these two lines be correctly read 2nd and 22nd of Pachon, or 1st and 21st Pachon, they would give the dates of the commencements of the 23rd and 19th years of Thothmes III., the latter being the first year of his actual reign after the deposition of Hatasu. As, however, authors differ as to the correct reading in both places, I have been very well pleased to obtain from a comparison of some inscriptions of Rameses II. what seems to me a convincing proof that the commencements of his regnal years were not on the same day of the civil year, but travelled backwards through it, though the inscriptions do not decide at what rate.

30. The inscriptions to which I refer are those which record the cyclical panegyries, of which ten appear to have been celebrated in thirty years. They are alluded to on the Rosetta Stone, and in the inscriptions of Pepi of the sixth dynasty. The chief of these panegyries was the first of the series, called Set. As it appears from the inscriptions of Pepi that the panegyries were celebrated on different days at different places, I will confine myself to the inscriptions of

Rameses II. at Silsilis, which are the most numerous, and apparently the best preserved. In Plate LXXXII. of BRUGSCH's "Recueil," No. 5, Rameses is said to have celebrated the Set for the first time in his 30th year through the whole of Egypt. In Plate LXXXIII., No. 1, the 1st, 2nd, 3rd, and 4th panegyries are said to have been in his 30th, 34th, 37th, and 40th years. These four dates are repeated on a second slab; and in No. 2 of the same Plate, the sixth panegyry is said to have been celebrated on the first of Tybi in the 4(6)th year of Rameses. So I restore the number in accordance with the other inscription, which gives an interval of three years between every two panegyries after the first and second. There are on the stone four vertical bars remaining, two above the other two, followed by a defect in the stone, which we may with equal propriety suppose to have contained two additional bars, one, or none at all, giving the three admissible readings, 46th, 45th, and 44th. I choose the first; and explain the series by supposing that all the panegyries at Silsilis were celebrated on the 1st Tybi, at intervals of 3 civil (or perhaps Sothic) years; that in the 30th year of the king the 1st Tybi was a few days before its close, whereas the 1st Tybi three years after this was a few days after the commencement of the 34th regnal year.

31. Whether what I have said in support of these two positions be considered as amounting to a demonstration or no, it will, I think, be conceded that the positions are rendered highly probable; and that any further evidence in support of the regnal year being one of 360 days ought to be carefully weighed. Now, within the last year, evidence of a most unexpected character has been noticed by me, connecting the supposed regnal year of 360 days with the supposed civil year of 365 days, in a document which I have already mentioned;—the Turin Book of Kings, which goes back to the origin of the new kingdom. In the pamphlet which accompanied Sir GARDNER WILKINSON's edition of the Book of Kings, published in 1851, I noticed in p. 55 the statements in fragment 1 that there were 330 kings,—the very number which HERODOTUS mentioned; and that their reigns amounted to 19 periods 11 years 4 months and 20 (or upwards) days. Whether there were any units after the 20 is not indicated in the MS. In the following line I read—"The 19 periods are 2280 years," giving for the length of a period 120 years. It never occurred to me to

doubt that these years (the 120 and the 2291) were civil years of 365 days, until last year. It then flashed upon my mind that they were regnal years of 360 days each; and I began to consider how many civil years would be equal to these 2291 regnal years. On making the calculation, I found that 2291 regnal years 4 months and 20 days were *precisely* equal to 2260 civil years!

32. But this was not the only coincidence that struck me. Previously to this, I had determined, by a critical examination of the different copies of MANETHO that the 18th dynasty began to reign, according to his original statement, in 1531 B.C.; and assuming with LEPSIUS that the 3556th year of Menes, being the first year after the conquest of Egypt by Ochus, began on 16th November, 340 B.C., the first year of the 18th dynasty, as determined by me, would begin on the 10th September, 1531 B.C., and would be the 2364th year of Menes. Now, both the Old Chronicle and EUSEBIUS make the duration of the 17th dynasty 103 years; and thus the first year of the 17th dynasty would be the 2261st of Menes, the *identical* year given by the Turin papyrus, as above interpreted! I have in § 27 given reasons for thinking that the Turin book of kings included all those previous to the 17th dynasty, and none of that dynasty.

33. As this paper may fall into the hands of persons who have not seen my papers in the "Journal of Sacred Literature," in which I trace back the readings in the present copies of MANETHO to the original from which they were corrupted; I will now give what I conceive to be the original reading of MANETHO, and will deduce from it the several corrupt readings which have successively superseded it; thus adopting the synthetic in place of the analytic method, and explaining as I go along the causes of the several corruptions. So far as respects the dynasties (which only, and not the several reigns, I will now discuss), the dates of their accessions and their durations were stated by me in January, 1863 ("Journal of Sacred Literature," vol. ii., p. 479), to have been as follows—I give the dates in years of the New Kingdom, which must be understood to be civil years of 365 days, and I add the date before Christ at which the civil year commenced.

## A.

	N. K.	Began.	Lasted years.
18th dynasty to the death of Amenophis, . . . .	1,	10th Sept., 1531,	162
Later reigns thereof, . . . 163,		31st July, 1369,	45
19th dynasty, . . . . 208,		20th July, 1324,	149
20th dynasty, . . . . 357,		13th June, 1175,	178
21st dynasty, . . . . 431,		25th May, 1101,	121
22nd dynasty, . . . . 552,		25th April, 980,	202
23rd dynasty, . . . . 754,		6th Mar. 778,	89
24th dynasty, . . . . 761,		4th Mar. 771,	44
		Sum up to this, . .	990
25th dynasty, . . . . 805,		21st Feb., 727,	44
26th dynasty, . . . . 849,		10th Feb., 683,	157
27th dynasty, . . . . 1006,		2nd Jan., 526,	"

This was MANETHO's genuine statement, on which I will observe, that I believe it to be quite correct up to the Ethiopian conquest, the summation preceding which has been preserved by AFRICANUS. After the Ethiopian conquest  $65 + 136$  would have been a better division than  $44 + 157$ , but the sum is correct. The New Kingdom lasted, according to MANETHO, 804 civil years to the Ethiopian conquest, 201 from that to the first Persian conquest, and 187 from that to the final Persian conquest:—in all, 1192 years, which with 2363 for the first seventeen dynasties (see § 32) makes up the 3555 years, which SYNCELLUS gives as MANETHO's own summation of the durations of the several dynasties.

34. I now proceed to consider the several corruptions of this genuine document. The first, which I will call B., throws back the rise of the 18th dynasty 186 years, or to - 185, beginning 26th October, 1717. The mistake arose in this manner:—MANETHO gave 990 for the sum of the actual durations of the several dynasties. Two of these dynasties, however, were overlapped by those which followed them. The 20th reigned 74 years before the rise of the 21st, and 104 years more as contemporary with it. The 23rd reigned only 7 years before

the rise of the 24th, and continued 82 years after that event, till the accession of Tirhakah to the crown of Egypt, 16 years after he became King of Ethiopia. Now, the author of this corruption—counting the durations of the 20th and 23rd dynasties as 74 and 7, in place of 178 and 89, and observing that this made the seven dynasties last only 804 years, which was indeed the entire interval during which they reigned; while MANETHO gave the sum of their durations as 990 years—added the 186 years of overlapping, which MANETHO had counted twice over, to the first part of the 18th dynasty, which he thus made to last 348 years. As the latter part of the 18th dynasty was sometimes counted into the 19th, this made the 18th and 19th either 348 + 194, or 393 + 149. The former division was adopted by EUSEBIUS and the Old Chronicle, the latter by JOSEPHUS and AFRICANUS. We have thus:—

## B.

N. K.	Began.	Lasted years.
18th dynasty, former part, — 185,	26th October, 1717,	348
18th dynasty, latter part, 163,	31st July, 1369,	45
19th dynasty, . . . . 208,	20th July, 1324,	149
20th dynasty, . . . . 357,	13th June, 1175,	74 or 178
21st dynasty, . . . . 431,	25th May, 1101,	121
22nd dynasty, . . . . 552,	25th April, 980,	202
23rd dynasty, . . . . 754,	6th March, 778,	7 or 89
24th dynasty, . . . . 761,	4th March, 771,	44
		990

As to the following dynasties B. does not differ from A.

35. From B. were derived two corrupt lists, which may be called C. and D. In one of these the 20th dynasty was allowed 178 years; but the 104 years which were struck off in B., and which in reality overlapped the 21st dynasty, were taken from the 22nd dynasty, which was thus reduced to 98 years. In like manner, in the other list, the 23rd dynasty was made to last 89 years; and the 82 years of overlapping, being subtracted from the 202 of the 22nd, reduced its length to 120 years. It so happened that of the two modes of dividing the 18th and 19th dynasties mentioned in § 34 the former was con-

nected with the former of the two corruptions mentioned in this section, and the latter with the latter. We have thus :—

## C.

N. K.	Began.	Lasted years.
18th dynasty, . . .—185,	26th October, 1717,	348
19th dynasty, . . . 163,	31st July, 1369,	194
20th dynasty, . . . 357,	13th June, 1175,	178
21st dynasty, . . . 535,	29th April, 997,	121
22nd dynasty, . . . 656,	30th March, 876,	98
23rd dynasty, . . . 754,	6th March, 778,	7
24th dynasty, . . . 761,	4th March, 771,	44

## D.

18th dynasty, . . .—185,	26th October, 1717,	393
19th dynasty, . . . 208,	20th July, 1324,	149
20th dynasty, . . . 357,	13th June, 1175,	74
21st dynasty, . . . 431,	25th May, 1101,	121
22nd dynasty, . . . 552,	25th April, 980,	120
23rd dynasty, . . . 672,	26th March, 860,	89
24th dynasty, . . . 761,	4th March, 771,	44

The remaining parts of these lists are the same as in B. and A. It will be observed that in none of these three corrupt lists is there any trace of wilful fraud. B. was derived from A. by a blunder ; and C. and D. were produced by injudicious attempts at correcting it, which only magnified the evil. In all these the accession of the 18th dynasty is placed 186 years too early ; but in C. we have that of the 22nd 104 years too late ; and as this occurred a few years before the death of Solomon we have here a gross anachronism. So also in D. the accession of the 23rd dynasty is placed 82 years too early, i. e. 84 years before the first Olympiad, which, according to a marginal note of MANETHO, it ought to have preceded by only a short interval.

36. The first intentional corruption of MANETHO's text was probably of a very early date. It originated in a fancy respecting the Trojan war. Some

Egyptian chronologers thought that the taking of Troy, which they placed in 1184 B. C., synchronized with the accession of the 20th dynasty, and they therefore threw this nine years too far back. The mode in which they did this was to add nine years to the 21st dynasty, giving thirty-five years, instead of twenty-six to its last king. This change was made in some copies of MANETHO, not in all, and it may have been antecedent to the formation of the lists C. and D. We may, however, consider these two lists to have been independently modified into what we may call C'. and D'. the first four lines of which are as follows, the remaining parts being the same as in C. and D. respectively:—

## C'.

	N. K.	Began.	Lasted years.
18th dynasty, . . .	— 194,	29th October, 1726,	348
19th dynasty, . . .	154,	3rd August, 1378,	194
20th dynasty, . . .	348,	15th June, 1184,	178
21st dynasty, . . .	526,	2nd May, 1006,	130

## D'.

18th dynasty, . . .	— 194,	29th October, 1726,	393
19th dynasty, . . .	199,	22nd July, 1333,	149
20th dynasty, . . .	348,	15th June, 1184,	74
21st dynasty, . . .	422,	28th May, 1110,	130

37. It was observed, however, that the number of 990 years, which MANETHO had given as the sum of the 18th and six following dynasties, was exceeded by this arrangement; and a new critic, who believed in the truth of this number, and who had no faith in the Trojan war, gave a new version of the latter list, which we may call D''. He restored the first two lines of D., and thus brought back the accession of the 20th dynasty to its date in B., or to 1175 B. C.; but having before him a list of kings in the 21st dynasty, which amounted to 130 years, and having a number, 74, as the summation of the 20th, which was accompanied by no names, he deducted the nine years in excess from this 74, instead of from 130. Thus the list D''. was formed, which I will give in full, because it is that from which the list of AFRICANUS has been

derived by a series of deliberate falsifications, the objects of which I am going to explain:—

## D'.

N. K.	Began.	Ended.	Lasted years.
18th dynasty, . . . — 185,	26th October, 1717,	1717,	393
19th dynasty, . . . 208,	20th July, 1324,	1324,	149
20th dynasty, . . . 357,	13th June, 1175,	1175,	65
21st dynasty, . . . 422,	28th May, 1184,	1184,	130
22nd dynasty, . . . 552,	25th April, 980,	980,	120
23rd dynasty, . . . 672,	26th March, 860,	860,	89
24th dynasty, . . . 761,	4th March, 771,	771,	44
			990
25th dynasty, . . . 805,	21st February, 727,	727,	44
26th dynasty, . . . 849,	10th February, 683,	683,	157
27th dynasty, . . . 1006,	2nd January, 526,	526,	"

38. This was the version of **MANETHO**, on which the early Christian, or perhaps the Jewish, chronologers set to work, in order to bring it into harmony with the Old Testament, or rather with their fanciful interpretations of the Old Testament. A comparison of it with the genuine list of **MANETHO** in § 33 will at once show how very erroneous this list is; but it has, at least, the merit of being an honest one; the successive changes made in it were the results of mistakes, or of injudicious attempts to correct mistakes.

39. The early Christians (and, there is some reason for supposing, the early Jews also) placed the Exodus in what we now call 1667 B. C. S. CLEMENS says that it was 345 years before the renewal of the Sothic cycle; that is, before the 20th of July, 1323 B. C. It was in the true year of the New Kingdom — 136, beginning 14th of October, 1668, or 49 years after the false date of the accession of the 18th dynasty in list D'. This ancient date of the Exodus, which is in fact March or April, 1667 B. C., is 176 years before that in the margins of our Bibles. Of this difference, 160 years are due to the difference of reading in 1 Kings, vi. 1, where the ancients read "640th," instead of "480th" of our present text. The remaining sixteen years are probably due to a difference in computing the reigns of the Jewish kings, which Dr. HALES

and others make sixteen or seventeen years more than Archbishop USSHER did. I have myself no doubt as to the ancients being right in reading 640th in 1 Kings, vi. 1 ; but I do not feel it desirable to discuss here the exact date either of the Exodus, or of the death of Solomon. The fact with which we have at present alone to deal is, that all ancient Christian chronologers,—I mean, all before JULIUS AFRICANUS,—placed the Exodus in the Egyptian year which began in October, 1668, 49 years after the then received date of the accession of the 18th dynasty.

40. Now, a large number of the early Christian chronologers believed that the accession of the 18th dynasty was identical with the Exodus of the Israelites. A more absurd opinion it is scarcely possible to conceive; and yet we know that it was held by JOSEPHUS and AFRICANUS, as well as by the ancient Christian chronologers generally. Hence it became an object to strike off 49 years from the New Kingdom. Of these 11 were struck off from the last two dynasties, being the odd units in 44 and 157, and the remaining 38 were struck off from the 24th dynasty, which was thus reduced from 44 to 6 years. As the sum of the dynasties of the New Kingdom to the end of the 24th was 990 years, according to a memorandum still existing in the text of AFRICANUS, this reduction would make them 952 ; and 952 is the actual sum of these dynasties according to the present text of AFRICANUS. Hence we obtain the text of MANETHO, which I will call E., falsified so as to make the origin of the New Kingdom coincide with the Biblical date of the Exodus.

## E.

N. K.	Began.	Lasted years.
18th dynasty, . . . 136,	14th October, 1668,	393
19th dynasty, . . . 257,	8th July, 1275,	149
20th dynasty, . . . 406,	1st June, 1126,	65
21st dynasty, . . . 471,	15th May, 1061,	130
22nd dynasty, . . . 601,	13th April, 931,	120
23rd dynasty, . . . 721,	14th March, 811,	89
24th dynasty, . . . 810,	20th February, 722,	6
25th dynasty, . . . 816,	18th February, 716,	40
26th dynasty, . . . 856,	8th February, 676,	150
27th dynasty, . . . 1006,	2nd January, 526,	"

E

41. This was the corrupted, and in fact falsified, text which AFRICANUS had before him, and he proceeded to falsify it still further. He had a theory of his own respecting the Exodus. He placed it 130 years before 1668, or in 1798 B. C. He added 110 years to the chronology of the Judges, and 21 years to the reign of Cyrus, confounding his accession to the crown of Persia in 559 with his conquest of Babylon in 538 B. C. This is in fact 131 years, but it is always called 130 by SYNCCELLUS. I rather suspect that he added 22 years to the reign of Cyrus, and omitted 2 years in some other place. At any rate, his date of the Exodus corresponds to 1798 B. C. ; and to bring his Egyptian chronology into harmony with his Jewish chronology, he added 130 years to the 19th and 20th dynasties—60 to the former, and 70 to the latter. Thus the first three lines of his list became as follows, the remainder being as in E.:—

E'. (AFRICANUS).

N. K.	Began.	Lasted years.
18th dynasty, . . . - 266,	16th Nov., 1798,	393
19th dynasty, . . . 127,	9th Aug., 1405,	209
20th dynasty, . . . 336,	18th June, 1196,	135

A subsequent corrector struck off the 130 years which AFRICANUS had added, thus restoring the Biblical date of the Exodus as that of the accession of the 18th dynasty. He, however, took the 130 years from the 18th dynasty itself, the duration of which he thus reduced to 263 years. According to his scheme, which is what SYNCCELLUS gives as that of AFRICANUS himself, the first line would be,

N. K.	Began.	Lasted years.
18th dynasty, . . . - 136,	14th Oct., 1668,	263

the next two lines as in E'., and the remainder as in E.

42. It appears from what I have said, that the supposed facts on which LEPSIUS, BUNSEN, DE ROUGÉ, and others, have most confidently relied, as established by the authority of that "most trustworthy" writer AFRICANUS—I mean, the 209 and 135 years of the 18th and 19th dynasty, by which 130 imaginary years are interposed between Rameses I. and Shishonk I., and the 6 years of the 24th dynasty, by which 38 real years are struck off—are the very changes

which AFRICANUS and his Christian predecessors made, in the most unwar-rantable manner, in order to bring MANETHO's already corrupted lists into harmony with the Old Testament, as they then read it.

43. I must now show how the numbers which we now find in the Old Chronicle, quoted by SYNCCELLUS, have been corruptly deduced from the genuine text. The years assigned in this Chronicle to the different dynasties were derived from those in the list C. by two successive falsifications. The first of these had for its object to rectify the accession of the 18th dynasty, by refer-ring it to the Biblical date of the Exodus, which we have seen to have been placed within the Egyptian wandering year which began 14th October, 1668 B. C., and of course to have actually occurred in March or April, 1667 B. C. The compiler of the Old Chronicle did not confound the expulsion of the Shepherds with the Exodus of the Israelites, as JOSEPHUS and AFRICANUS and his predecessors had done. He thought that the 18th dynasty commenced the persecution of the Israelites ; that Moses was born a year after its accession, and the Exodus took place 81 years after its accession, when Moses was 80 years old; and that, consequently, the accession of the 18th dynasty was in the Egyp-tian year - 217, which began 3rd November, 1749 B. C. This was 32 years before the date in C. (§ 35), and the corrupter of the text accordingly added 12 years to the 23rd dynasty, and 20 to the 26th, as in the following list F. We see that in the Old Chronicle the sum of the seven dynasties so often spoken of is 1002 years, 12 years more than the true number preserved by AFRICANUS.

F.			
N. K.	Began.	Ended.	Length.
18th dynasty, . . . - 217,	3rd Nov., 1749,	348	
19th dynasty, . . . 131,	8th Aug., 1401,	194	
20th dynasty, . . . 325,	21st June, 1207,	178	
21st dynasty, . . . 503,	7th May, 1029,	121	
22nd dynasty, . . . 624,	7th April, 908,	98	
23rd dynasty, . . . 722,	14th Mar., 810,	19	
24th dynasty, . . . 741,	9th Mar., 791,	44	
25th dynasty, . . . 785,	26th Feb., 747,	44	
26th dynasty, . . . 829,	15th Feb., 703,	177	
27th dynasty, . . . 1006,	2nd Jan., 526,	"	

44. The list of dynasties in the Old Chronicle differs from this only by its having undergone an additional corruption. In it there are 228 years given to the 20th dynasty, and only 48 to the 22nd; 50 years having been taken from the latter, and added to the former. The motive for this change is not difficult to discover. The King of Egypt who took Jerusalem in the 5th year of Rehoboam is called Shishak. Modern Egyptologists identify him with the Σέωνχος of AFRICANUS, the first king of the 22nd dynasty, which, according to A., the genuine list of MANETHO, began to reign in 980 B. C. This is in conformity with the received chronology; but the 22nd dynasty did not begin to reign till 908 B. C., according to list F.; while the author of that list placed the fifth of Rehoboam in or about 986 B. C. He, therefore, felt himself under an obligation to obviate this anachronism by making some change. MANETHO gives the names of all the kings of the 21st dynasty, and none of these has any resemblance to Shishak; but no name is given for the 20th dynasty. The reason of this was, doubtless, that all, or almost all, the kings of this dynasty bore the one name of Rameses. The compiler of the Old Chronicle thought, however, that Shishak must have belonged to this dynasty, and that it must, therefore, have extended till after 984 B. C. He chose to add a round number of years to the dynasty, and this could be no other than 50. Thus we have, according to the Old Chronicle:—

N. E.	Began.	Lasted years.
18th dynasty, . . . - 217,	3rd Nov., 1749,	348
19th dynasty, . . . 131,	8th Aug., 1401,	194
20th dynasty, . . . 325,	21st June, 1207,	228
21st dynasty, . . . 553,	25th April, 979,	121
22nd dynasty, . . . 674,	26th March, 858,	48
23rd dynasty, . . . 722,	14th March, 810,	19

The remainder as in list F., last section.

45. I now come to EUSEBIUS, whose list, it appears to me, has undergone a modification since it was originally drawn up. That modification cannot, I think, have originated in the error of a copyist; it must be EUSEBIUS' own. Whether the list in its first form, which I will call G., was drawn up by EUSEBIUS himself, and afterwards corrected to what we now have, I will not pretend to say.

If not, we must suppose that he borrowed a great deal from some other chronologer whose name is unknown. EUSEBIUS, or whoever was the compiler of G., adopted the first four lines of C',—those in which it differed from C. (§ 35), and the date of the accession of the 22nd dynasty; but he reduced the length of the dynasty to 49 years. This was the sum of the only three reigns in the dynasty of which MANETHO had given the lengths. He had given two summations of three reigns each; and as they amounted to 67, or perhaps 71, years, while the list C. had only 98 years for the whole dynasty, it was necessary to cut them down. The most natural course was to strike them off altogether, and to appropriate the years which he would thus have to spare to the 23rd dynasty, which had only 7 years for four named kings. The list G. would thus be:—

N. K.	Began.	Lasted years.
18th dynasty, . . .—194,	29th Oct., 1726,	348
19th dynasty, . . . 154,	3rd Aug., 1378,	194
20th dynasty, . . . 348,	15th June, 1184,	178
21st dynasty, . . . 526,	2nd May, 1006,	130
22nd dynasty, . . . 656,	30th March, 876,	49
23rd dynasty, . . . 705,	18th March, 827,	47
24th dynasty, . . . 752,	6th March, 780,	44
		—
		990

The correct number 990 for the sum of the seven dynasties is thus attained; but if EUSEBIUS had continued as in C., which does not differ from A. in its concluding part, he would have placed the conquest of Egypt in 535 B.C. To avoid this anachronism, he added 10 years to the length of the 26th dynasty, thus concluding:—

N. K.	Began.	Lasted years.
25th dynasty, . . . 796,	23rd Feb., 736,	44
26th dynasty, . . . 840,	12th Feb., 692,	167
27th dynasty, . . . 1007,	2nd Jan., 525,	"

46. Now, the list of EUSEBIUS differs from this in bringing down all the dates before the accession of the 24th dynasty three years. He effected this by

making the 23rd dynasty to last only 44 years, in place of 47. And it is very remarkable that, along with these Egyptian dates, he brought down the date of the taking of Troy, thus preserving the synchronism which the Alexandrian chronologers had imagined. His reason for making this change I take to be this:—His date of the Exodus was 1511 B.C., 133 years before the accession of the 19th dynasty. He considered it necessary that the death of a king of Egypt should synchronize with the Exodus; and as the last five reigns of the 18th dynasty lasted 136 years, he effected the necessary synchronism by depressing the accession of the 19th dynasty three years. This led him to depress by three years the accessions of all the dynasties connected with this by sure intervals. He stopped at the 23rd dynasty, the duration of which was a mere inference of his own, not supported by any genuine reading; but by so doing he reduced the 990 to 987, thus furnishing the means of detecting what he had done.

47. I have been the more particular in establishing the correct readings of **MANETHO**, because M. BRUGSCH assumes the truth of the extended chronology in vogue among Egyptologists, and builds on it an argument for the antiquity of the fixed year beginning in the latter part of August. We have a date, he says, of the rising of Sothis on the 28th Epiphi in the reign of Thothmes III. This implies that the year then began on the 27th August. The wandering year of the astronomers would do this in the year 1476–3 B.C.; but, according to M. BRUGSCH's chronology, Thothmes III. could not have been king at that time. Therefore he supposes that the civil year of the Egyptians could not have been the wandering year, but must have been a fixed year, beginning near the end of August. In reply to this it might be said that M. CHABAS, who agrees with M. BRUGSCH as to the chronology of the dynasties, has shown that it is not *certain* that this inscription belongs to the reign of Thothmes III. I think, indeed, that he has failed to show that it is not highly probable; but if I believed in the chronological system of MM. CHABAS and BRUGSCH, I should far rather believe with the former that the inscription was of a later date than M. BRUGSCH supposes, than admit the existence of a fixed civil year beginning in August, of which there is no other proof. In fact, however, if my chronological system, as above explained, be adopted, the date of 1476–1473 B.C. falls

within the reign of Thothmes III., as it seems to me most probable that the inscription ought to do.

48. There is another ancient date, which M. BRUGSCH alleges to refer to his civil year, but I cannot admit that there is a shadow of evidence that it does so. He quotes an inscription of Pepi at Hamamât, in which a panegyry is said to be celebrated in the 18th year of Pepi on the 27th Epiphi, *sep tapi*, which he says means, "on the 1st day of the Sothic, or sacred, quadrennium :" from this he argues that the 27th Epiphi of the civil year corresponded to the 20th July, and of course the 1st Thoth of the civil year to the 28th August. As a complete refutation of this, I need only state the following facts, which I give on M. BRUGSCH's own authority.—"Recueil," p. 98. In Wadi Magara, near Mount Sinai, there is an inscription similar to this, dated in the 18th year of Pepi, but on the sixth Mesore, nine days after the other inscription. Will M. BRUGSCH affirm that Sothis rose 9 days later in Wadi Magara than it did in Hamamât, about three degrees south of it? or in what other manner will he account for the fact which he so strangely suppresses in 1864, having published it, and drawn special attention to it, in 1863? I will only add that *sep tapi* is translated by others, and was translated by M. BRUGSCH in 1863, "the first time." Pepi celebrated the Set panegyry, of which he was probably the originator, in different parts of his dominions on different days; on the 27th Epiphi at Hamamât, on the 6th Mesore at Wadi Magara; at other places on other days of which no record has been preserved. We have no right to assume that any of these days was the first of Thoth of the sacred year; most probably, indeed, all these dates are to be referred to the sacred year. It is most probable that Pepi reigned before the wandering year began to be used; and as for the fixed civil year to which M. BRUGSCH refers these dates, it was never known till after the taking of Alexandria by Cæsar Octavianus.

49. The remarkable coincidences which I have pointed out—namely, that 2291 years (of 360 days) 4 months and 20 days, the duration assigned by the Turin papyrus to the 330 kings of its ten dynasties, should be *precisely* equal to 2260 years of 365 days; and that 2260 added to 103, the years of the 17th dynasty, and 1192, the years, which, according to my restoration of MANETHO above explained (§ 33), intervened between the accession of the 18th dynasty and the conquest of Egypt by Ochus, should be *precisely* equal to 3555, the

number of years which **MANETHO** places between Menes and Ochus—would in my judgment go very far to establish the existence of a civil year of 365 days, and that of a regnal year of 360 days, dating from each king's accession, if there remained any doubt as to either of these facts, after the evidence in support of them which I have already adduced. It will naturally be asked,—do I believe in this number of 3555 years as the actual interval between Menes and Ochus ? This question I proceed to answer.

50. I believe the latter part to be authentic, or historic, in the strictest sense of the word. I think there is no more reasonable doubt that the 17th and following Egyptian dynasties began in the years B. C. which I have assigned to them in this paper, 1634 B. C. and following dates, than that the Grecian and Roman sovereigns reigned at the times generally assigned to them. I think, too, that it may be desirable to use the era of Menes as **LEPSIUS** has done ; and we may do this as we use the year of the Julian period, carrying back the Egyptian wandering year proleptically. I do not, however, believe that there were 2260 years between Menes and the 17th dynasty, though the Egyptian chronologer who compiled the Turin Book of Kings calculated that there were. I do not think that there is *as yet* any decisive evidence on the subject one way or other ; but my present belief is, that 2260 years is above the truth. Having at different times paid a good deal of attention to the Turin papyrus, I will in the first place state what I believe to be the system of its author. I will give its ten dynasties, the number of reigns of each, and the duration of each, as far as can be collected from the papyrus. It will be observed that inverted commas are used when the papyrus gives the number between them. Other numbers are computed from the length of the columns and from the numbers given in the papyrus conjointly. The first column gives the number of the dynasty according to the papyrus ; the second gives the Manethonic dynasties which appear to correspond ; the third gives the number of reigns ; and the fourth, the duration:—

Pap.	Man.	Reigns.	Years.
I.	I.	12,	" 263,"—(Fr. 17)
II.	II.	5,	92?
<hr/>			
		Sum " 355" ?*—(Fr. 44, l. 4)	
III.	III. and IV.	29,	
IV.	V.	21,	
<hr/>			
		Sum " 67,"—(Fr. 34 <sup>a</sup> , l. 4)	
V.	VI.	13,	" 181,"—(Fr. 61, l. 5)
VI.	VIII.	" 18,"—(Fr. 61, l. 1)	
VII.	XI.	25,	" 243,"—(Fr. 64, l. 1)
VIII.	XII.	8,	" 213, . 1 . 15"—(Fr. 72 <sup>a</sup> , l. 3)
IX.	XIII.	199,	
X.	SHEPHERDS		
<hr/>			
		Sum " 330"	" 2291, . 4 . 20"

51. I will now offer a few remarks on this list. In the first place, the 3rd and 4th dynasties of **MANETHO** are, to a certain extent, distinguished in the Papyrus : Soris, the first king of the latter, has his royal title in red ink, but there is no summation before him.† Secondly, I cannot think that the Papyrus contained 330 kings. If there were allowed to be 70 or 80 in the last two dynasties, that is, 200 or 210 in all, I should think it the outside limit. Accordingly, I think that the remaining 130 or 120 kings belonged to the dynasties omitted in the Papyrus, but found in **MANETHO**. The author of the Papyrus probably considered the remaining dynasties to be contemporary with those he recorded ; but he seems to have considered these last to have all

\* The hundreds are uncertain. Perhaps we should read 455; and, of course, 192 in the preceding line.

† In my contribution to Sir GARDINER WILKINSON's volume, in 1851, I endeavoured to find a dynastic sum in the mutilated line preceding that which contains the name of Soris (Fr. 18, l. 5). In this, however, I was mistaken, as is proved by the newly discovered Tablet of Abydos, where Soris (No. 16), is preceded by a king (No. 15), evidently identical with the mutilated name in Fr. 18, l. 4.

reigned successively. At any rate, with the imperfect information which we possess as to the durations which he assigned to the several dynasties, it is impossible for us to say whether he did or not. Now, I think it is quite evident from other monumental evidence that of these ten dynasties all did not reign in succession. I suspect that the 6th and 7th, and again that the 9th and 10th, were in part contemporary; but I think it certain that the whole of the 2nd and considerable portions of the 1st and 4th were contemporary with the 3rd. The complete Tablet of Abydos, lately excavated by MARIETTE BEY, and published by M. DÜMICHEN in the "Egyptian Zeitschrift" for last October, seems to me to prove this. Its first and second kings appear to me to represent the Menes of MANETHO, the two kings of that name in the Turin papyrus, who together reigned 62 years. The next three kings in the Abydos list represent the Athotis of MANETHO, having reigned together 57 years; but the last of these five is the Tosorthros of MANETHO, the second king in the 3rd dynasty of the Papyrus; as Necheroches, whose name occurs first in the Papyrus, is the first of the 3rd dynasty in MANETHO. No king of the 2nd dynasty of MANETHO and of the Papyrus is found in the Abydos list; nor is any of the last seven kings of their 1st dynasty. After these we have in the Abydos Tablet 22 more kings of the 3rd dynasty of the Papyrus; the Papyrus having had 27. The Tablet contained only six kings of the next dynasty, and yet the Papyrus has 21 kings belonging to it.\* To me it seems quite evident that this dynasty, originally confined to the extreme south of Egypt, displaced in course of time the second dynasty in Middle Egypt, and did not reign at Memphis till within a few reigns before its close. I will not, however, pursue this subject. I return to the Egyptian year.

52. I think I have proved, in opposition to M. BRUGSCH, that the Egyptian civil year was a wandering year of 365 days, as has been the generally received opinion. The sacred or Sothic year was in use along with this; and the two kinds of years coincided as to their commencements in four years of every

\* The fifteenth royal name in this dynasty, as it appears in the Papyrus, is followed by the words, "passed in his reign years —" The number is destroyed. This seems to indicate that this was the first of the dynasty who reigned in Memphis. It follows that seven of the dynasty did so, one of whom is omitted in the Abydos Tablet.

Sothic cycle. The 1st of Thoth of the civil year coincided with the 6th of the Epagomenæ of the Sothic year in the first year of the cycle ; and in the remaining 1460 years it coincided with each of the 365 days of the ordinary Sothic year for four years in succession ; coinciding with the 5th Epagomenæ in the 2nd–5th years of the cycle, and so on backwards to the 1st Thoth, with which it coincided in the 1458th to the 1461st. At the close of the cycle, which began under the 19th dynasty, these four years were those which began in A. D. 134, 135, 136, and 137, in the first two of which the two years both began on the 21st of July, and in the last two on the 20th of July. Of course, the Sothic year always began on the 21st of July in years A. D. of the forms 134–4*i* and 135–4*i*, and on the 20th in years of the form 136–4*i* and 137–4*i*. On any given day, say the *n*th, of the Sothic year, the civil year would begin in the four years 138–4*n*, 139–4*n*, 140–4*n*, and 141–4*n*. Hence it follows that the Esne Calendar, in which the civil 1st of Thoth, the new year of “the year of the ancients,” began on the 9th Thoth of the Sothic year (see § 12), was composed for one of the four years A. D. 102, 103, 104, or 105 ; the 1st of Thoth being on the 21st of July in the two former years, and on the 20th in the two latter. To which of these four years the Esne Calendar belongs, I will show further on.

53. The civil or wandering year of the Egyptians dates from the 20th of July, 2783 B. C., the 1st of Thoth of its 1st year. The Sothic year, with its *quadrennia* of 1461 days, was more ancient still. It must date from the time when the solstice coincided with the rising of Sothis. According to LABETEAU’s Tables, this would happen about 3200 B. C. ; but an error of a few centuries may exist in this calculation. Before this astronomical epoch the Egyptian year began at the solstice of summer, or at the beginning of the inundation, which was practically the same thing.

54. It seems certain, however, that the Egyptians used a different kind of year from either of these ; and that this originated at an earlier period than that just mentioned, and continued in use till long after the Roman conquest. I speak of the lunar year, which began at the new moon after the solstice, and had four lunar months of inundation, four lunar months of winter, and four, or, when necessary, five months of genial season. The date of the commencement of this lunar year as the new moon *next after* the solstice, not the new

moon nearest to it, may be inferred from the words of PLINY, who says that the inundation began at the new moon that followed the summer solstice. This is obviously absurd, if the actual commencement of the inundation be intended. PLINY had heard, however, that "the tetrameny of the inundation" of what may be called the popular year began at this time, and he referred this, in error, to the actual inundation.

55. This lunar year was recognised by LEPSIUS in the introduction to his Egyptian Chronology, published in 1848 (pp. 150, and following, and 218). As proofs of its existence in remote antiquity, he gave the use of the moon's figure in the hieroglyphic group for "month," the mention in very ancient inscriptions of monthly and half-monthly festivals, probably those of the new and of the full moon, and of the feast of the commencement of the short year, that of 354 days, as he interpreted it. What LEPSIUS then said is not altogether defensible; he thought at that time that the first season was that which followed the inundation, and some of his statements assume this error. I suspect, also, that "the short year" of the ancient inscriptions was a wandering lunar year of twelve months without intercalation, such as is now used by Mahometans. It appears to me certain that this kind of year was used by the Egyptians in the Roman period, and it is not likely that it was then introduced for the first time.

56. The commencements of these lunar years seem to me to be clearly indicated in the Calendar of Esne, which M. BRUGSCH has published in his recent work, but which he confesses his inability to explain. To explain it on his system is simply impossible; but its explanation seems to me, with my views, as above explained, the simplest thing in the world. M. BRUGSCH finds in this calendar the commencements of three kinds of years noted—one of which, he says, is the Sothic year, but the two others are unknown years. I find in the Esne Calendar the commencements of *four* years noticed:—The Sothic year; the civil or wandering year; the regulated lunar year, beginning soon after the summer solstice; and the short or wandering lunar year.

57. I will first give the extracts from the calendar bearing on the subject; and as this is a question of interpretation, and not of translation, I will translate from M. BRUGSCH's French, pp. 19–21:—

"1st Thoth, at the doubly-good beginning of the year, the panegyry of Amon, and the panegyry of Chnoum."

"9th (Thoth), panegyry of Amon, panegyry of Ra, and panegyry of the new year of the ancients.

"26th Payni, at the panegyry of the new year, panegyry of the opening in the temple of the god, to give clothing to the sacred crocodiles."

M. BRUGSCH quotes a passage from the "Commentary on the Phenomena of ARATUS," in which an ancient year of 365 days only, wandering through the seasons, is expressly mentioned (p. 21). He might have quoted many other testimonies to the same fact, as I have done in the former part of this paper. He says, however, to my great astonishment, that he can find no trace of such a year on the monuments, and pronounces that the sacred or Sothic year was the year of the ancients. According to his views, therefore, the Esne Calendar speaks of three years, commencing on the 12th of July, the 20th of July, and the 3rd of May. Of the first and third of these he offers no explanation. M. MARIETTE, in a paper in the "Revue Archeologique," for March, 1865, which has just reached me as I write this section, appears to think, on the contrary, that the three years indicated began on the 1st Thoth, 9th Thoth, and 26th Payni of M. BRUGSCH's pretended civil year, or of the Alexandrian year, that is, on the 29th of August, 6th of September, and 20th of June. The last of these three beginnings he connects with the summer solstice, and the beginning of the inundation. Of the second, however, which is distinctively called "the year of the ancients," he offers no explanation.

58. In fact, no explanation can be given on M. BRUGSCH's hypothesis. On mine, the beginnings of four years are noted:—The Sothic, the old wandering civil, the regulated lunar, and wandering lunar years. The calendar belongs to the Sothic year which began 21st July, A. D. 103; which was the new moon according to Egyptian usage, the day on which the conjunction took place (about 9 p. m. Memphitic time).\* On this day two festivals coincided—one of

\* This was the conjunction *next after* the solstice, though not the one nearest to it. See § 54. According to LARGETEAU's Tables, the preceding conjunction was on the 22nd June, at 6 a. m., while the sun did not reach the tropic till the 24th of June, at 3 p. m. In Egypt this was the most natural commencement of the lunar year, the solstice being coincident with the beginning of the inundation. The Athenian year, before the introduction of cycles, began at the same time; but in Attica there was no natural reason for its doing so. We can only account for this by supposing that the Athenians derived their year from Egypt. Their own

which fell on the 1st of the Sothic Thoth, the other on the 1st of the lunar Thoth ; and it was a “doubly-good [or festive]” day. Eight days after, the 29th July was the first day of the wandering or civil Thoth; and 295 days, or ten lunations, after the 1st Thoth of the calendar, was the first day of the wandering lunar year, 11th May, A. D. 104. See §§ 12 and 52, where I have proved that the dates in the Esne Calendar refer to the Sothic year, and that it was composed for one of the four years, A. D. 103–106.

59. The lunar year is not often used in monumental dates ; and yet I think it is so sometimes. For instance, a scarabaeus (“Ros. M. R.” xliv. 2) states that on the 1st Athyr in the 11th year of Amenhotep III. a great basin began to be dug, and that on the 16th Athyr, the great panegyry of the inundation was celebrated there. This could not be the 16th Athyr of M. BRUGSCH’s fancied year, which would fall in November, from the 8th to the 12th ; nor of the Sothic year, whose 16th Athyr would fall on the 3rd or 4th of October; nor could it be of the wandering year, which would begin some nine days later ; but the Nile is at its height, according to the Egyptian almanacs cited by M. BRUGSCH (p. 6), 96 days after the solstice, or on the 25th September. This would well suit the date according to the lunar calendar, the 16th Athyr being 74 days after the new moon which followed the solstice. Besides, the mention of the 1st and 16th days of the month suggests the lunar calendar. The Egyptians had feasts on the 1st and 16th of every month ; and LEPSIUS has long since pointed out that these must be lunar months. M. BRUGSCH (pp. 10, 11) affirms that the Nile attains its greatest height 141 to 144 days after the solstice. Evidently, as it appears to me, he has confounded the greatest height of the inundation with its termination. The death of Osiris may have been connected with the latter, but certainly not with the former.

60. Another date which appears to me evidently lunar is that of the Exodus. This is said over and over again to have occurred in the month Abib, which I cannot believe to be anything else than the Egyptian Epiphi, or Epip, pronounced by the Arabs of this day Ebib. The received opinion is, that this is a Hebrew derivation of the root בְּכָר, the exact meaning of which is

tradition of Cecrops was, doubtless, in the main correct. I may add, that the Athenian δῆμος, in its original sense, and the Egyptian *dīmī*, appear to have been similar in their nature, as well as identical in their name.

doubted ; but בָּבִּין is interpreted new or green corn in the ear. That it signifies, as a Hebrew word, corn in the ear, is evident, from Lev. ii. 14 ; but *ripe* corn would be, at least, as suitable in that text as *green* corn ; and the use of the root in Assyrian, where it is very common, proves that the signification of *ripeness* attaches to the root. *Abub* is ripe corn, ready for the sickle ; the character for the syllable *ib* represents a man cutting down corn ; and בָּבִּין, doubling the final consonant in its cases, is an adjective denoting the colour of silver and of a building stone of an excellent kind—the *zakur*—probably alabaster, but certainly not lapis lazuli, as Sir H. RAWLINSON imagines. It would follow from this that *Abib* was the month of *ripe corn*. It is very possible that the Hykshos, who were of the Semitic stock, may have given the name *Abib* to the eleventh Egyptian month, in which in common, i. e. not embolismatic, years, wheat was usually ripe. It is possible, also, that the Egyptian name *Epip* had an Egyptian derivation, yet undiscovered. It seems, however, on either supposition, all but certain that the name of the month in the Pentateuch is taken from the Egyptian *Epiphi*, and that it is asserted that the Exodus took place in the eleventh lunar month of the Egyptians.

61. Now, from this fact we may draw two inferences:—First, that the Exodus took place in the eleventh month of an embolismatic year, and indeed in one in which the new moon of the lunar Thoth was a very few days after the summer solstice. From the solstice to the vernal equinox was 271 days, and from the new moon of the first to the new moon of the eleventh Egyptian month was 295 days. It follows from this that it would not be possible for the first new moon to be that next after the summer solstice, and the eleventh to be that next after the vernal equinox, if the interval from the solstice to the new moon exceeded five days. Considering the inequalities of the moon, it should not, for safety's sake, exceed four days. Generally speaking, the lunar Payni would coincide with the Hebrew month that was afterwards called Nisan ; but in some few years the lunar Epiphi would coincide with it, and such a year must be that of the Exodus. If, therefore, we know the date of this approximately, we can ascertain it with exactness. For example, the Exodus could not have been in 1491 B. C., Archbishop USSHER's date ; but it might have been in 1489 B. C.

62. Secondly, I infer from the fact that I have been considering that the statement, so often repeated in the Pentateuch, that the Exodus took place in

the month **Abib**, or **Epiphi**, could not have been made by a writer of a later age than the **Exodus**, or at any rate by an Israelite who was a stranger to Egypt. This is one of those undesigned coincidences with facts not generally known, which negative the supposition that the document in which they occur is a forgery.

63. I had intended, at the conclusion of this paper, to have examined several detached statements made by M. BRUGSCH in his "Materiaux." I find, however, that to do this would render it impossible for me to conclude this paper in time for it to be read during the present Session of the Royal Irish Academy. I wish, also, to compare the statements to which I have referred with others that as yet I have not seen. I content myself, therefore, with once more recording my decided conviction that the Egyptians never had a fixed year other than that which began on the 21st or 20th July of our present calendar; that they had a wandering year of 365 days, coinciding with this as to its commencement in A. D. 134-137 and 1460, and 2920 years before these; and that they had also a lunar year, beginning at the new moon next after the summer solstice, or the commencement of the inundation.

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#### APPENDIX.

IT was not till after I had written out a fair copy of that portion of the preceding paper which treats of the 3555 years between the accession of Menes and the conquest of Ochus, and of its two parts, 2260 years from Menes to the accession of the seventeenth dynasty, and 1295 from the last event to the final subversion of the native monarchy—the latter of which intervals I hold to be of certain, but the former of very doubtful, authenticity—it was not, I say, till after this that I saw the copy of the "Four hundred year Stèle," published by M. MARIETTE, with his comments upon it, and an essay on the same subject by M. CHABAS. Both these writers agree in condemning the views of M. DE ROUGÉ, who inferred that Ramees I. was descended from the Hykshos, or Shepherds. I have not seen M. DE ROUGÉ's own paper, but I cannot hesitate to adopt the views of his critics on the point in question. What is most interesting, however, in this stèle is the date which it bears. "In the 400th year of a certain king, the 4th of Mesore." Who is this king? and what is the epoch which began with his reign. I have very little doubt that he was

the first king of the last Shepherd dynasty, the 17th of MANETHO, which is said to have been a dynasty of "Shepherds and Thebans," the latter being tributary to the former. After the dynasties enumerated in the Turin papyrus,—which reigned, according to that document, 2291 regnal years (of 360 days) 4 months and 20 days; equivalent to 2260 civil years of 365 days, but which were never reduced to civil years till the calculation was made for the whole period at its close,—a new era commenced, in which the reigns of the different kings were, in Lower Egypt at least, or at any rate in the neighbourhood of San, that is to say, Avaris, the royal residence of the Shepherds, where this inscription was found, dated in civil years from the accession of the 17th dynasty. Thus, the year of this inscription, the 400th year from this era, is the 2660th from the conventional era of Menes, or that which began 30th June, 1235 B. C.; and its actual date is 29th May, 1234 B. C. The inscription is dated in the reign of Rameses II.; and, though it is not stated in what year of his reign it was engraved, it may be seen that it was at a late period in it. The father of the person commemorated appears from his name to have been born in the reign of Rameses I.; and the person commemorated himself was a "first prophet" of Sutech—an office which, except in cases where it was held by one of the royal family, necessarily supposes that the person holding it is advanced in life. Now, according to my chronological system, the date in the 400th year of Noubiti would be in the 65th year of Rameses II., which is in complete accordance with the indications of the Tablet. This king Noubiti was probably that Asseth who is named by SYNCCELLUS as a reformer of the Egyptian calendar, and by JOSEPHUS as a Shepherd. I take this name to be corrupted from the throne-name in the Tablet, which should be read *Aa-pheh-seth*, according to the analogy of *Men-pheh-rā* (Menophres), the throne-name of Rameses I. The aspirates *th*, *kh*, and *ph*, when they come between two vowels, are apt to lose their sounds in Egyptian, as in many other languages; and in transcribing Egyptian names, the Greeks contracted them as much as they could. I think, therefore, that *A-σήθ* is a very possible representation of the throne-name before us.

The conventional era of Menes began 2260 Egyptian civil years before that of Noubiti; and the last named era preceded that of the New Kingdom by 103 years, and that of the new Sothic cycle, or of Menophres, by 311 years.

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#### ADDITIONAL APPENDIX.

AFTER the first sheet of this paper was printed, I received the "Revue Archéologique" for August, which contains an unexpected confirmation of the opinion expressed in § 12, that the horizontal line was not required, in Greek writing of the Roman period, over numeral letters which are preceded by **L**. A chromo-lithograph is given of the writing on a Græco-Egyptian Ostracon of the reign of Antoninus. It concludes with the date, **L** κρ

Αντωνίου Καισαρος του κυριου θωθ ιθ. There is a horizontal line over the *ιθ*, after the name of the month, but none over the *κυ* after **L**.

Within the last fortnight I received a copy of a work of Professor LAUTH, of Munich—“Manetho und der Turiner Königs-Papyrus.” As the views of the ingenious author are completely at variance with those expressed by me in § 31, and again in §§ 50 and 51, of the preceding paper, I desire to add a few brief remarks. M. LAUTH admits that the Papyrus mentions 330 kings, in Fr. 1, l. 4; and 2291 years 4 months and 2 (4?) days, in l. 6; but, notwithstanding the statement of HERODOTUS (b. ii., c. 100), that the Egyptian priests read to him out of a book the names of this precise number of kings *after Menes*, he contends that the Papyrus is here speaking of gods. This appears to me most improbable; and it does not appear to me any proof of its being the case that in lines 9 and 10 the Papyrus reverts to the reigns of the gods, giving summations exceeding 13,000 and 23,000 years.

Passing on to § 50, I find that Professor LAUTH rejects the greater part of the summations cited by me from the Papyrus. I can only appeal against his judgment to those who have studied the forms of the hieratic numerals; remarking, in the first place, that Dr. BIRCH, who prepared the transcript of the Turin Papyrus into hieroglyphics, which accompanied Sir G. WILKINSON’s edition, agrees with my readings in almost every instance; and, in the second place, requesting my readers to refer to LEPSIUS’ or WILKINSON’s edition, in preference to M. LAUTH’s. In Fr. 17 I was surprised and sorry to find that a new reading of the contents of the fragment has been substituted by M. LAUTH for that given by the two former editors. Their reading consists of incomplete characters, which may be completed to 263, the sum of the eight reigns in the first dynasty according to AFRICANUS; but M. LAUTH’s reading admits of no such completion, nor has it indeed the appearance of a numeral at all. Of the number in Fr. 44 I will say nothing, as I admit that the true reading and the position of the fragment are doubtful: M. LAUTH reads 555 – 253 for the first, and 302 for the second dynasty. What I take to be 67 in Fr. 34<sup>a</sup>, he cannot see to be a number at all. This is consistent; for the 60 is here formed precisely as in Fr. 17, as this appears in LEPSIUS’ and WILKINSON’s editions. In Fr. 61, l. 5, he reads 1081 in place of 181, making this the sum of all the dynasties to the end of the 8th, instead of the sum of the 6th. Of all his readings this is the most extraordinary; as the character for 100 has not the slightest resemblance to that for 1000, and the character formed precisely as here is read 100 by M. LAUTH in Fr. 1, l. 2.

Until the proper reading of these numbers be determined, it would be useless for me to discuss the details of the arrangement of the earliest kings in the Abydos Tablet, proposed in §. 51. I have seen nothing, however, in M. LAUTH’s ingenious work, or elsewhere, to lead me into any doubt of its general correctness.



THE END.







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